

REMARKS

Claims 1-66 were previously pending in the application. Claims 1, 14, 23, 27, 40, 42, 49, 53, 55, 56, and 58 are amended. Claims 35 and 48 are cancelled. Claims 67-72 are newly added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

Applicant would like to thank the Examiner for courtesy extended during the interview on March 15, 2007.

SPECIFICATION

The specification stands objected to for certain informalities. Applicant herein amended paragraph [0013] of the specification to replace "current sources 50 and 52" with "current sources 42 and 44". Therefore, reconsideration and withdrawal of this objection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 112

Claims 36, 42 and 55-56 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 36 was amended to depend from Claim 27, which provides antecedent basis for "said transistor".

Claim 42 was amended to depend from Claim 41, which provides antecedent basis for "said first voltage limiting means".

Claims 55 and 56 were amended to depend from Claim 54, which provides antecedent basis for "said shunting device".

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 6, 11-12, 14, 19, 24-25, 27, 32, 37-38, 40, 45, 50-51, 53 and 59 are rejected under 35 U.S.C. §102(b) as being anticipated by Schuelke et al. (U.S. Pat. No. 6,005,733). This rejection is respectfully traversed.

With respect to Claim 1, Schuelke fails to show, teach or suggest an electrostatic discharge (ESD) protection circuit that includes a normally ON transistor. Schuelke also fails to show, teach or suggest a transistor that receives a voltage control signal based on a read state of a read element.

Applicant is unable to find any disclosure of an ESD circuit including a normally ON transistor in Schuelke or any of the other prior art references of record. Thus, Schuelke and the other prior art references fail to show, teach or suggest each and every element of Claim 1.

For anticipation to be present under 35 U.S.C §102(b), there must be no difference between the claimed invention and the reference disclosure as viewed by one skilled in the field of the invention. Scripps Clinic & Res. Found. V. Genentech, Inc., 18 USPQ.2d 1001 (Fed. Cir. 1991). All of the limitations of the claim must be inherent or expressly disclosed and must be arranged as in the claim. Constant v. Advanced Micro-Devices, Inc., 7 USPQ.2d 1057 (Fed. Cir. 1988).

Although the switches S_1 , S_2 of Schuelke are closed when the magnetoresistive element R_{MR} is not selected, there is no mention in Schuelke that the switches S_1 , S_2

are normally on or closed. It appears from Schuelke that all of the switches S_1 - S_4 are normally open and are closed when power is supplied, see FIG. 1 of Schuelke.

The present invention provides a normally ON transistor to provide ESD protection during manufacturing, handling and shipping in the absence of power. See paragraphs [0038], [0048], [0049], and [0051] of the present application. Claim 1 is allowable for at least this reason.

As best understood by Applicant, Schuelke discloses a bias circuit that includes a first pair of switches S_1 , S_2 that are closed when a magnetoresistive element R_{MR} is not selected. Schuelke also discloses a second pair of switches S_3 , S_4 that are coupled in parallel to said first pair of switches S_1 , S_2 . The second pair of switches S_3 , S_4 are open when the magnetoresistive element R_{MR} is selected. Thus, a voltage potential of the magnetoresistive element R_{MR} terminals 12, 14 are shunted regardless of a read state of the magnetoresistive element R_{MR} . The claimed transistor is controlled based on a read state of the read element. Claim 1 is allowable for at least this reason.

Claims 1, 9-10, 12, 14, 22-25, 27, 35-36, 38, 40, 48-51, 53 and 57-58 are rejected under 35 U.S.C. §102(b) as being anticipated by Voldman (U.S. Pub. No. 2002/0097532).

With respect to Claim 1, Voldman fails to show, teach or suggest a normally ON transistor that receives a voltage control signal based on a read state of a read element.

As best understood by Applicant, Voldman discloses an ESD protection device that includes normally OFF transistor 32 that is triggered by ESD events. In paragraph [0020], Voldman states that during an ESD event gate voltage is pulled high as a trigger for turn-on. Claim 1 is allowable for at least this reason.

During an ESD event, the ESD protection device of Voldman may experience a delay period between an ESD event and the transistor 32 being turned on. The delay may be due to charging of a gate voltage circuit, such as gate voltage circuit 34 of Voldman, and/or due to response time of the transistor 32. The delay may prevent adequate protection. The claimed invention provides instantaneous protection since the normally ON transistor is already closed.

The transistor of Voldman is activated in response to an ESD event. When voltage on terminals 14A and 14B is high enough, a gate voltage source 34 triggers the transistor 32. The transistor 32 is not triggered in response to read state of a read element. On the other hand, the claimed transistor is ON when the read element is OFF or disabled and OFF when the read element is enabled.

Therefore, Claim 1 is allowable for at least the above reasons. Claims 14, 27, 40 and 53 are allowable for at least similar reasons as Claim 1. Claims 2-13, 15-26, 28-34, 36-39, 41-47, 49-52 and 54-72 ultimately depend from Claims 1, 14, 27, 40 and 53 and are allowable for at least similar reasons.

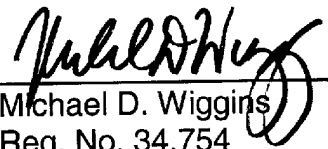
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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By: _____


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